

CLAIMS

1 1. A buffer arrangement comprising:
2 a predetermined plurality of ports; and
3 buffer resources of a predetermined size;
4 wherein any number of said plurality of ports may be arranged for use for
5 data-handling, and wherein said buffer resources are configurable to have a sub-size of said
6 buffer resources assigned to each port of said plurality of ports in a first configuration
7 where all of said plurality of ports are arranged for use for data handling, and wherein said
8 buffer resources are reconfigurable to have a differing sub-size of said buffer resources
9 assigned to at least one used port of said plurality of ports in a second configuration when a
10 lesser number than said plurality of ports are arranged for use for data handling.

1 2. A buffer arrangement as claimed in claim 1, wherein a concatenation
2 arrangement is used to make said buffer resources reconfigurable to have said differing
3 sub-size of said buffer resources assigned to at least one used port of said plurality of ports
4 in said second configuration.

1 3. A buffer arrangement as claimed in claim 1, wherein at least a portion of a
2 buffer resource of an unused port is reassignable to said at least one used port in
3 reconfiguration of said buffer resources to said differing sub-size assigned to at least one
4 used port in said second configuration.

1 4. A buffer arrangement as claimed in claim 1, wherein said buffer resources
2 are configurable to have a substantially equal sub-size of said buffer resources assigned to
3 each port of said plurality of ports in said first configuration where all of said plurality of
4 ports are arranged for use for data handling.

1 5. A buffer arrangement as claimed in claim 1, wherein said buffer resources
2 are reconfigurable to have a second substantially equal sub-size of said buffer resources
3 assigned to each used port of said plurality of ports in said second configuration when said
4 lesser number than said plurality of ports are arranged for use for data handling, said
5 second substantially equal sub-size being different in size from said substantially equal sub-
6 size where all of said plurality of ports are arranged for use for data handling.

1 6. A buffer arrangement as claimed in claim 1, wherein said buffer
2 arrangement is reconfigurable by at least one of switches and programmable registers.

1 7. A buffer arrangement as claimed in claim 1, wherein said buffer
2 arrangement is embodied in at least one of a multi-port switch and repeater.

1 8. A buffer arrangement as claimed in claim 7, wherein said at least one of a
2 multi-port switch and repeater is arranged to comply with at least one of Next Generation
3 Input/Output (NGIO), Future Input/Output (FIO) and InfiniBand standards.

1 9. A data-handling device comprising:

2 a buffer arrangement comprising:

3 a predetermined plurality of ports; and

4 buffer resources of a predetermined size;

5 wherein any number of said plurality of ports may be arranged for use for
6 data-handling, and wherein said buffer resources are configurable to have a sub-size of said
7 buffer resources assigned to each port of said plurality of ports in a first configuration
8 where all of said plurality of ports are arranged for use for data handling, and wherein said
9 buffer resources are reconfigurable to have a differing sub-size of said buffer resources
10 assigned to at least one used port of said plurality of ports in a second configuration when a
11 lesser number than said plurality of ports are arranged for use for data handling.

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1 10. A data-handling device as claimed in claim 9, wherein a concatenation
2 arrangement is used to make said buffer resources reconfigurable to have said differing
3 sub-size of said buffer resources assigned to at least one used port of said plurality of ports
4 in said second configuration.

1 11. A data-handling device as claimed in claim 9, wherein at least a portion of a
2 buffer resource of an unused port is reassignable to said at least one used port in
3 reconfiguration of said buffer resources to said differing sub-size assigned to at least one
4 used port in said second configuration.

1 12. A data-handling device as claimed in claim 9, wherein said buffer resources
2 are configurable to have a substantially equal sub-size of said buffer resources assigned to

3 each port of said plurality of ports in said first configuration where all of said plurality of
4 ports are arranged for use for data handling.

1 13. A data-handling device as claimed in claim 9, wherein said buffer resources
2 are reconfigurable to have a second substantially equal sub-size of said buffer resources
3 assigned to each used port of said plurality of ports in said second configuration when said
4 lesser number than said plurality of ports are arranged for use for data handling, said
5 second substantially equal sub-size being different in size from said substantially equal sub-
6 size where all of said plurality of ports are arranged for use for data handling.

1 14. A data-handling device as claimed in claim 9, wherein said buffer
2 arrangement is reconfigurable by at least one of switches and programmable registers.

1 15. A data-handling device as claimed in claim 9, wherein said data-handling
2 device is embodied in at least one of a multi-port switch and repeater.

1 16. A data-handling device as claimed in claim 15, wherein said at least one of a
2 multi-port switch and repeater is arranged to comply with at least one of Next Generation
3 Input/Output (NGIO), Future Input/Output (FIO) and InfiniBand standards.

1 17. A system comprising:
2 a data-handling device comprising:
3 a buffer arrangement comprising:

4 a predetermined plurality of ports; and
5 buffer resources of a predetermined size;
6 wherein any number of said plurality of ports may be arranged for use for
7 data-handling, and wherein said buffer resources are configurable to have a sub-size of said
8 buffer resources assigned to each port of said plurality of ports in a first configuration
9 where all of said plurality of ports are arranged for use for data handling, and wherein said
10 buffer resources are reconfigurable to have a differing sub-size of said buffer resources
11 assigned to at least one used port of said plurality of ports in a second configuration when a
12 lesser number than said plurality of ports are arranged for use for data handling.

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1 18. A system as claimed in claim 17, wherein a concatenation arrangement is
2 used to make said buffer resources reconfigurable to have said differing sub-size of said
3 buffer resources assigned to at least one used port of said plurality of ports in said second
4 configuration.

1 19. A system as claimed in claim 17, wherein at least a portion of a buffer
2 resource of an unused port is reassignable to said at least one used port in reconfiguration
3 of said buffer resources to said differing sub-size assigned to at least one used port in said
4 second configuration.

1 20. A system as claimed in claim 17, wherein said buffer resources are
2 configurable to have a substantially equal sub-size of said buffer resources assigned to each

3 port of said plurality of ports in said first configuration where all of said plurality of ports
4 are arranged for use for data handling.

1 21. A system as claimed in claim 17, wherein said buffer resources are
2 reconfigurable to have a second substantially equal sub-size of said buffer resources
3 assigned to each used port of said plurality of ports in said second configuration when said
4 lesser number than said plurality of ports are arranged for use for data handling, said
5 second substantially equal sub-size being different in size from said substantially equal sub-
6 size where all of said plurality of ports are arranged for use for data handling.

1 22. A system as claimed in claim 17, wherein said buffer arrangement is
2 reconfigurable by at least one of switches and programmable registers.

1 23. A system as claimed in claim 17, wherein said data-handling device is
2 embodied in at least one of a multi-port switch and repeater.

1 24. A system as claimed in claim 23, wherein said at least one of a multi-port
2 switch and repeater is arranged to comply with at least one of Next Generation
3 Input/Output (NGIO), Future Input/Output (FIO) and InfiniBand standards.

1 25. A method of providing a buffer arrangement comprising:
2 providing a predetermined plurality of ports;
3 providing buffer resources of a predetermined size;

4 wherein any number of said plurality of ports may be arranged for use for
5 data-handling; and

6 when in a first configuration where all of said plurality of ports are arranged
7 for use for data handling, configuring said buffer resources to have a sub-size of said buffer
8 resources assigned to each port of said plurality of ports; and

9 when in a second configuration when a lesser number than said plurality of
10 ports are arranged for use for data handling, re-configuring said buffer resources to have a
11 differing sub-size of said buffer resources assigned to at least one used port of said plurality
12 of ports.

1 26. A method as claimed in claim 25, wherein a concatenation arrangement is
2 used to make said buffer resources reconfigurable to have said differing sub-size of said
3 buffer resources assigned to at least one used port of said plurality of ports in said second
4 configuration.

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